

REMARKS

The application has been amended to place the application in condition for allowance at the time of the next Official Action.

Claims 1-22 are pending in the present application.

Claims 1-4, 10-16, 18, 19, 21 and 22 are rejected as unpatentable over TAGUSA et al. 5,946,065 in view of ZHANG 6,219,118 and further in view of applicants' disclosed prior art. This rejection is respectfully traversed.

Claim 1 is amended and recites a plurality of control electrodes each disposed directly under a gap between adjacent pixel electrodes and over a gate line. Each of the plural control electrodes is an extension of a corresponding source electrode of one of the switching elements and is continuous with the corresponding source electrode.

The TAGUSA reference in Figure 1, for example, shows a connecting electrode 25, noted in the Official Action as a control electrode. However, this electrode is neither disposed directly under a gap between adjacent pixel electrodes nor overlies the gate line.

In addition, column 12, lines 28-33 of TAGUSA teach that the connecting electrode 25 extends to connect the drain electrode 36b of the TFT and the storage capacitor electrode 25a of the storage capacitor. TAGUSA does not teach or suggest plural control electrodes being an extension of a corresponding

source electrode of one of the switching elements and being continuous with the corresponding source electrode as recited.

ZHANG teaches a light shielding electrode 116, which is offered in the Official Action as a control electrode. However, column 2, lines 45-46 of ZHANG teach that light shielding electrode 116 is disposed so as to cover source lines 113 and gate lines 110. As seen in Figure 1 of ZHANG, light shielding electrode 116 is neither an extension of a source electrode nor continuous with the source electrode.

Applicants' disclosed prior art Figure 9, for example, fails to show each of plural control electrodes being an extension of a corresponding source electrode of one of the switching elements and being continuous with the corresponding source electrode.

The above-noted features are missing from each of the references, are absent from the combination, and thus would not have been obvious to one having ordinary skill in the art.

Claims 2-4 and 10-15 depend from claim 1 and further define the invention and are also believed patentable over the cited prior art.

Claim 16 is amended and recites that the plural control electrodes are entirely within an adjacent two of the data lines.

The ZHANG reference is offered for the teaching of the light shielding electrode 116 that is within the gap between

adjacent pixel electrodes 118 and that overlies gate electrode 110.

However, as seen in Figure 2 of ZHANG, the light shielding electrode 116 extends beyond the boundaries of source lines 113 (indicated in the Official Action as data lines). Column 2, lines 37-58 of ZHANG teaches that the light shielding electrode completely shields the source lines 113 to prevent any external electromagnetic waves received by the source lines 113 which may cause erroneous or faulty operation of the device. Accordingly, ZHANG requires that the source lines 113 be covered by the light shielding electrode 116.

Modifying the ZHANG reference so that the control electrodes are entirely within an adjacent two of the data lines would render ZHANG unsatisfactory for its intended purpose.

The Federal Circuit has held that if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

In order to use the teachings of ZHANG as a shield against electromagnetic waves to prevent the gate and source electrodes from receiving undesired signals, the black matrix of ZHANG must extend to cover source lines and could not be entirely within an adjacent two of the source lines. Accordingly, the

teachings of ZHANG could not be combined with TAGUSA or applicants' disclosed prior art.

Therefore, claim 16 and claims 18-19 which depend therefrom are believed patentable over the proposed combination of references.

Independent claim 22 is amended and recites that the control electrodes extend from and are continuous with a source of one of the switching elements. Claim 22 also recites that the control electrodes are directly under a first gap between adjacent pixel electrodes and directly overlies the first gate line. The analysis above regarding claim 1 is equally applicable to claim 22.

Claims 5-9, 17 and 20 are rejected as unpatentable over TAGUSA in view of ZHANG and applicants' disclosed prior art and further in view of YAO et al. 5,682,211. This rejection is respectfully traversed.

YAO is only cited for the teaching of a control electrode on the same layer and integrally formed with the source electrode and having a multilayer structure comprising of metal.

However, the reference does not teach all that for which it is offered.

Specifically, YAO is offered for the teaching of a plurality of control electrodes having the same potential voltage as the source electrodes of the switching element.

However, the recited control electrodes are each disposed directly under an adjacent pixel electrode. Accordingly, there are two separately recited elements, a pixel electrode and a control electrode under the pixel electrode.

In YAO, there is only a single electrode, pixel electrode 72.

Column 3, lines 56-67, noted in the Official Action as teaching a control electrode, is only directed to pixel electrode 72. The pixel electrode 72 has a gap 712 between adjacent pixel electrodes 72 and an overlap 710. Such overlap 710 is an overlap of pixel electrode 72 with the gate line 34, as seen in Figure 2 of YAO. YAO does not teach or suggest a plurality of control electrodes each disposed directly under a gap between adjacent pixel electrodes as recited. Therefore, the YAO reference could not teach or suggest that the control electrode is formed integrally with the source electrode of the switching element.

Moreover, the source electrode of YAO is source electrode 41, not element 25, which is noted in the Official Action. Applicants have reviewed the entirety of the YAO reference and are unable to discern reference numeral 25.

However, column 3, lines 15-20 of YAO teaches source electrodes 41 are extensions of data lines 32 as seen in Figure 1. YAO neither teaches a control electrode nor a control electrode integrally formed with the source electrode of the switching element as recited.

Neither TAGUSA, ZHANG nor applicants' disclosed prior art teaches or suggests this feature.

Thus, the above-noted feature is missing from each of the references, is absent from the combination and thus would not have been obvious to one having ordinary skill in the art.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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